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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Applicant: Skinner et al.

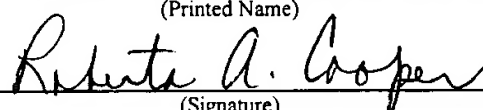
Title: WIRELESS TRANSACTION
ENABLED HANDHELD
COMPUTER SYSTEM AND
METHOD

Appl. No.: 09/865,657

Filing Date: 5/25/2001

Examiner: Ferguson, Keith

Art Unit: 2683

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BRIEF ON APPEAL

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Sir:

Under the provisions of 37 C.F.R. § 41.37, this Appeal Brief is being filed together with a credit card payment form in the amount of \$500.00 covering the 37 C.F.R. 41.20(b)(2) appeal fee. If this fee is deemed to be insufficient, authorization is hereby given to charge any deficiency (or credit any balance) to the undersigned deposit account 06-1447.

This paper is being filed in response to the final Office Action dated July 26, 2005 (finally rejecting claims 1-20). The Notice of Appeal was filed on November 21, 2005. Appellants respectfully request favorable reconsideration of the application.

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1. **REAL PARTY IN INTEREST**

The real party in interest is the assignee of record, Palm, Inc. (as recorded in the records of the United States Patent and Trademark Office at Reel/Frame 011861/0921 on May 25, 2001).

2. **RELATED APPEALS AND INTERFERENCES**

There are no related appeals or interferences that will directly affect, be directly affected by, or have a bearing on the present appeal, that are known to Appellants or Appellants' patent representative.

3. **STATUS OF CLAIMS**

This is an appeal from the final Office Action dated July 26, 2005, finally rejecting claims 1-20. Claims 1-20 are on appeal.

4. **STATUS OF AMENDMENTS**

Claims 1-20 were pending in the application when a final Office Action dated July 26, 2005 was issued. No claims have been amended in the present application subsequent to the receipt of the final Office Action dated July 26, 2005.

5. **SUMMARY OF CLAIMED SUBJECT MATTER**

The present application relates generally to handheld computers in which wireless communications are enabled when the computer battery is below a minimum charge level and when the handheld computer is receiving power from a power source for battery recharging. See Specification, page 2, paragraph [0004].

Independent claim 1 is directed to a handheld computer system (100, 300). See Figs. 1-3. The handheld computer system (100, 300) includes a housing and a display (114) supported by the housing. See Specification, page 5, paragraph [0016], Figs. 1-2. The handheld computer system (100, 300) also includes a processor coupled to the display. See Specification, pages 4-5,

paragraph [0015]. The handheld computer system (100, 300) also includes a rechargeable battery (320) configured to power the processor and the display (114). See Specification, page 6, paragraph [0021] and page 7, paragraph [0023]; Fig. 3. The handheld computer system (100, 300) also includes a recharging connector (340) coupled to the rechargeable battery (320). See Specification, pages 6-7, paragraph [0022] and page 7, paragraph [0023]; Fig. 3. The handheld computer system (100, 300) also includes a recharger (350) coupled to the recharging connector (340). See Specification, page 7, paragraph [0023]; Fig. 3. The handheld computer system (100, 300) also includes a radio frequency transceiver (330) coupled to the processor (see Specification, page 7, paragraph [0023]) and powerable by the battery (320) when the battery (320) has a charge above a low level. See Specification, pages 7-8, paragraph [0026]. The transceiver (330) is configured to send and receive data while the battery charge is below the low level and the recharger (350) provides charge to the rechargeable battery (320) and to the transceiver (330), the low level being a level at which the battery (320) is unable to power the transceiver (330) when the charge is below the low level. See Specification, pages 7-8, paragraphs [0024]-[0026].

Independent claim 7 is directed to a method of transmitting data over a radio frequency (RF) link from a handheld computer (100, 310) having a low battery charge. The method includes providing the handheld computer (100, 310) with a rechargeable battery (320) having a relatively low charge, the relatively low charges being too low to transmit information using a transceiver (330) of the handheld computer (100, 310). See Specification, page 7, paragraphs [0023]-[0024]. The method also includes coupling the handheld computer (100, 310) to a recharger 350. See Specification, page 7, paragraphs [0023]-[0024]. The method also includes providing power from the recharger (350) to the transceiver (330) of the handheld computer (100, 310) and the battery (320) while the handheld computer is coupled to the recharger. See Specification, pages 7-8, paragraph [0026]. The method also includes establishing an RF link using the transceiver (330) while the battery (320) has a relatively low charge and the handheld computer (100, 310) is coupled to the recharger. See Specification, pages 7-8, paragraph [0026].

Independent claim 14 is directed to a handheld computer (100, 310). The handheld computer (100, 310) includes a housing and a display supported by the housing. See Specification, page 5, paragraph [0016], Figs. 1-2. The handheld computer also includes a processor coupled to the display (114). See Specification, pages 4-5, paragraph [0015]. The handheld computer (100, 310) also includes a rechargeable battery (320) configured to power the processor and the display (114). See Specification, page 6, paragraph [0021] and page 7, paragraph [0023]; Fig. 3. The handheld computer (100, 310) also includes a recharging connector (340) coupled to the rechargeable battery (320). See Specification, pages 6-7, paragraph [0022] and page 7, paragraph [0023]; Fig. 3. The handheld computer (100, 310) also includes a radio frequency (RF) transceiver (330) coupled to the processor (see Specification, page 7, paragraph [0023]) and powerable by the battery (320) when the battery (320) has a charge above a low level. See Specification, pages 7-8, paragraph [0026]. The transceiver (330) is configured to send and receive data while the battery charge is below the low level and the recharging connector (340) receives power from a power source (360) and provides power to the rechargeable battery (320) and to the transceiver (330), the low level being a level at which the battery (320) is unable to power the transceiver (330) when the charge is below the low level. See Specification, pages 7-8, paragraphs [0024]-[0026].

Independent claim 20 is directed to a handheld computer (100, 310). The handheld computer (100, 310) includes an expansion module (345) including a rechargeable battery (320) and a radio frequency (RF) transceiver (330), the battery (320) is configured to power the transceiver (330) when the battery (320) has a charge above a low level. See Specification, page 8, paragraph [0027]. The handheld computer (100, 310) also includes a processor, a display (114) (see Specification, pages 4-5, paragraph [0015]) and a module connector (340) configured to couple to the expansion module. See Specification, pages 6-7, paragraph [0022] and page 7, paragraph [0023]; Fig. 3. The RF transceiver (330) is configured to send and receive data while the battery charge is below the low level and the module (345) receives power from a power source (360) and provides power to the rechargeable battery (320) and to the transceiver (330),

the low level being a level at which the battery (320) is unable to power the transceiver (330) when the charge is below the low level. See Specification, pages 7-8, paragraphs [0024]-[0027].

6. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

The issues on appeal are (1) whether claims 1, 3, and 14-16 may properly be rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,949,216 (“Miller”) in view of U.S. Published Patent Application No. 2002/0193152 (“Soini et al.”) and further in view of U.S. Patent No. 4,684,870 (“George et al.”); (2) whether claims 2 and 4-6 may properly be rejected under 35 U.S.C. § 103(a) as being unpatentable over Miller in view of Soini et al. and further in view of George et al. and further in view of U.S. Published Patent Application No. 2002/0163778 (“Hazzard et al.”); (3) whether claims 7-13 may properly be rejected under 35 U.S.C. § 103(a) as being unpatentable over Soini et al. in view of U.S. Published Patent Application No. 2002/0078248 (“Janik et al.”) and further in view of George et al.; (4) whether claim 17 may properly be rejected under 35 U.S.C. § 103(a) as being unpatentable over Miller in view of Soini et al. and further in view of George et al. and further in view of U.S. Published Patent Application No. 2002/0133565 (“Huat”); (5) whether claims 18-19 may properly be rejected under 35 U.S.C. § 103(a) as being unpatentable over Miller in view of Soini et al. and further in view of George et al. and further in view of Janik et al.; and (6) whether claim 20 may properly be rejected under 35 U.S.C. § 103(a) as being unpatentable over Janik et al. in view of Soini et al. and further in view of George et al.

7. ARGUMENT

I. LEGAL STANDARDS

All claim rejections at issue in this appeal are made under 35 U.S.C. § 103(a)¹ The legal standards under 35 U.S.C. § 103(a) are well-settled.

¹ “A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having

Obviousness under 35 U.S.C. § 103(a) is a legal conclusion involving four factual inquiries:

- (1) the scope and content of the prior art;
- (2) the differences between the claims and the prior art;
- (3) the level of ordinary skill in the pertinent art; and
- (4) secondary considerations, if any, of non-obviousness.

Litton Systems, Inc. v. Honeywell, Inc., 87 F. 3d 1559, 1567, 39 U.S.P.Q. 2d 1321, 1325 (Fed. Cir. 1996). See also Graham v. John Deere Co., 383 U.S. 1, 148 U.S.P.Q. 459 (1966).

In proceedings before the Patent and Trademark Office (PTO), the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art. In re Piasecki, 745 F.2d 1468, 1471-72, 223 U.S.P.Q. 785, 787-88 (Fed. Cir. 1984). A prima facie case of obviousness requires that the prior art reference or references teaches or suggests all of the claimed limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). “The Examiner can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. In re Fritch, 972 F.2d 1260 (Fed. Cir. 1992); In re Fine, 837 F.2d 1071, 1074 (Fed. Cir. 1988); In re Lalu, 747 F.2d 703,705, 223 U.S.P.Q. 1257, 1258 (Fed. Cir. 1984); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 297 n.24, 227 U.S.P.Q. 657, 667 n.24 (Fed. Cir. 1985); ACS Hospital Systems, Inc. v. Montefiore Hospital, 782 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984).

A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. See W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983). It is improper to combine references

ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.” 35 U.S.C. §103(a).

where the references teach away from their combination. See In re Grasselli, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983). When a reference teaches away from the claimed invention, that teaching is strong evidence of non-obviousness. See U.S. v. Adams, 383 U.S. 39, 148 U.S.P.Q. 79 (1966); In re Royka, 490 F. 2d 981, 180 U.S.P.Q. 580 (CCPA 1974). If the proposed combination of the references would change the principle of operation of the reference being modified, the teachings of the references are not sufficient to render the claims prima facie obvious. See In re Ratti, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959). If proposed modification would render the prior art unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. See In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

As noted by the Federal Circuit, the “factual inquiry whether to combine references must be thorough and searching.” McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 60 USPQ.2d 1001 (Fed. Cir. 2001). Further, it “must be based on objective evidence of record.” In re Lee, 277 F.3d 1338, 61 USPQ.2d 1430 (Fed. Cir. 2002). The teaching or suggestion to make the claimed combination must be found in the prior art, and not in the applicant’s disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ.2d 1438 (Fed. Cir. 1991). The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ.2d 1430 (Fed. Cir. 1990). “It is improper, in determining whether a person of ordinary skill would have been led to this combination of references, simply to ‘[use] that which the inventor taught against its teacher.’” Lee (citing W.L. Gore v. Garlock, Inc., 721 F.2d 1540, 1553, 220 USPQ 303, 312-13 (Fed. Cir. 1983)).

II. REJECTION OF CLAIMS 1, 3 AND 14-16 UNDER 35 U.S.C. § 103(a) BASED ON MILLER IN VIEW OF SOINI ET AL. AND GEORGE ET AL.

In the final Office Action dated July 26, 2005, the Examiner rejected claims 1, 3, and 14-16 under 35 U.S.C. § 103(a) as being unpatentable over Miller in view of Soini et al. and George et al.

Claim 1 is in independent form and claim 3 depends from claim 1.

Claim 14 is in independent form and claims 15-16 depend from claim 14.

The Examiner's rejection of claims 1, 3, and 14-16 under 35 U.S.C. § 103(a) based on the combination of Miller, Soini et al., and George et al. should be reversed because the Examiner has failed to establish a prima facie case of obviousness with regard to claims 1, 3, and 14-16. More specifically, for at least the reasons stated below, no proper combination of Miller, Soini et al., and George et al. teaches or suggests the subject matter of claims 1, 3, and 14-16.

A. The Examiner's Rejection of Claims 1, 3, and 14-16 Should Be Reversed Because the Combination of Miller, Soini et al., and George et al. Does Not Teach or Suggest At Least One Element of Each of Claims 1, 3, and 14-16.

A prima facie case of obviousness requires that the prior art reference or references teaches or suggests all of the claimed limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). The combination of Miller, Soini et al., and George et al. does not teach or suggest at least one element of each of claims 1, 3, and 14-16. Accordingly, the Examiner has failed to establish a prima facie case of obviousness, and the rejection of claims 1, 3, and 14-16 should be reversed.

1. Claims 1 and 3

Independent claim 1 recites in combination with other limitations a "transceiver configured to send and receive data while the battery charge is below the low level and the recharger provides charge to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level." The cited combination of Miller, Soini et al., and George et al. does not teach or suggest a "transceiver configured to send and receive data while the battery charge is below the low level and the recharger provides charge to the rechargeable battery and to the transceiver, the low level

being a level at which the battery is unable to power the transceiver when the charge is below the low level” as included in the combination of elements of claim 1.

In the final Office Action dated July 26, 2005, the Examiner acknowledged that:

Miller differs from claim 1 of the present invention in that it does not explicitly disclose the transceiver configured to send and receive data while the battery charge is below the low level, the battery unable to power the transceiver when the charge is below the low level, the recharger provides the charge to the rechargeable battery and to the transceiver, the low level being a level which the battery is unable to power the transceiver when the charge is below the low level.

The Examiner further stated, however, that “Soini et al teaches ... a transceiver configured to send and receive data while the battery charge is below the low level (inherent, since a warning is given to the user through the display when the battery drops below a pre-limit value 1warning 32),” that “if the voltage over the battery drops further below preset limit value 2, warning 33, the multi-service mobile station cuts off power supply to the telephone module which are connected with the transmission and reception of messages by radio,” and that “data traffic is not cut off until the battery level drops below the preset limit value, (power off 35, taught in paragraph 0042 lines 1-5), the battery unable to power the transceiver when the charge is below the low level (paragraph 0040 lines 7-10).”

While Soini et al. may teach several different battery warning levels, Soini et al. does not disclose a “low level” below which radio transmission and reception of data continues at the same time the battery is unable to power the radio transmission and reception of messages when the charge is below the low level. For example, Soini et al. teaches that at the first preset limit value 1Warning 32, a warning is displayed, but does not teach that the battery is unable to power the radio transmission and reception of messages when the charge is below the first preset limit value 1Warning 32. See Soini et al., paragraph [0040]. Moreover, even if Soini et al. were to inherently teach that the radio transmission and reception of messages takes place while the battery is below the first preset limit value 1Warning 32, Soini et al. also inherently teaches that

such radio transmission and reception is powered by the battery below the first preset limit value 1 Warning 32. Thus, Soini et al. does not teach that the radio transmission and reception of messages takes place while the battery is unable to power the radio transmission and reception of messages below the first preset limit value 1 Warning 32, or that charging is provided for the battery at the same time as for the radio transmission and reception below the first preset limit value 1 Warning 32.

Soini et al. also teaches that at the second preset limit value 2 Warning 33, “mobile service station 1 cuts off power supply to means 42, which are connected with transmission and reception of messages by radio.” See Soini et al., paragraph [0040]. Thus, Soini et al. does not teach that radio transmission and reception takes place while the battery is unable to power the radio transmission and reception of messages below the second preset limit value 2 Warning 33. Nor does Soini et al. teach that charging is provided for the battery at the same time as for radio transmission and reception below the second preset limit value 2 Warning 33. Thus, the combination of Miller and Soini et al. fails to teach, disclose, or suggest a “transceiver configured to send and receive data while the battery charge is below the low level and the recharger provides charge to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level” as included in the combination of elements of claim 1.

George et al. fails to disclose any of the elements of claim 1 mentioned above that are lacking in the combination of Miller and Soini et al. In the final Office Action dated July 26, 2005, the Examiner stated that George et al. teaches “an apparatus for recharging a rechargeable battery in a hand held transceiver while maintaining communications capability through the transceiver when the rechargeable battery is unable to power the transceiver (abstract, col. 1 lines 9-18 and col. 1 lines 40-67).” In an Advisory Action dated October 20, 2005, the Examiner further stated that “[t]he George et al. and Soin et al. reference was used to modify the Miller data phone so that the data phone could to continuous transmit and receive data while the

rechargeable batter is recharging, thereby providing continuous power to the transceiver while powering the battery when using internet service.”

George et al., however, discloses that batteries conventionally must be removed for recharging, the removal of the battery rendering the receiver inoperable. George et al. also discloses that in its invention “[t]he battery charger further includes charging circuit means for selectively charging the transceiver battery from a source of a first voltage during transmit mode and the source of a second, higher voltage during receive mode.” See George et al., col. 1, lines 49-53. George et al. teaches that the first and second charging voltages are selected using a PTT switch. See George et al., col. 4, lines 54-57. Thus, George et al. teaches the use of a PTT switch to select a first voltage during a transmit mode and a second voltage during a receive mode while charging a battery, and, as with Miller, does not disclose a “low level” below which the battery is unable to power the transceiver, and below which the transceiver and battery are both powered by the battery charger. Furthermore, George et al. has nothing to do with radio transmission of data, but rather discloses “a conventional transceiver having a microphone, speaker, and ... a push-to-talk (PTT) switch” Col. 3, lines 28-34. Thus, the cited combination of Miller in view of Soini et al. and further in view of George et al. does not teach or disclose a “transceiver configured to send and receive data while the battery charge is below the low level and the recharger provides charge to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level” as included in the combination of elements of claim 1.

Therefore, it is respectfully submitted that the Examiner has failed to establish a prima facie case of obviousness because the combination of Miller, Soini et al., and George et al. does not teach or suggest at least one element of claim 1, and that and the rejection of claim 1 should be reversed. Furthermore, claim 3 depends from independent claim 1, and therefore the rejection of claim 3 should be reversed for at least the same reasons as discussed above with regard to claim 1. See 35 U.S.C. § 112 ¶ 4.

2. Claims 14-16

Independent claim 14 recites in combination with other limitations “transceiver configured to send and receive data while the battery charge is below the low level and the recharging connector receives power from a power source and provides power to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level.” The cited combination of Miller, Soini et al., and George et al. does not teach or suggest “transceiver configured to send and receive data while the battery charge is below the low level and the recharging connector receives power from a power source and provides power to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level” as included in the combination of elements of claim 14.

In the final Office Action dated July 26, 2005, the Examiner acknowledged that:

Miller differs from claim 14 of the present invention in that it does not explicitly disclose the transceiver configured to send and receive data while the battery charge is below the low level, the battery unable to power the transceiver when the charge is below the low level, the recharger provides the charge to the rechargeable battery and to the transceiver, the low level being a level which the battery is unable to power the transceiver when the charge is below the low level.

The Examiner further stated, however, that “Soini et al teaches ... a transceiver configured to send and receive data while the battery charge is below the low level (inherent, since a warning is given to the user through the display when the battery drops below a pre-limit value lwarning 32),” that “if the voltage over the battery drops further below preset limit value 2 warning 33, the multi-service mobile station cuts off power supply to the telephone module which are connected with the transmission and reception of messages by radio,” and that “data traffic is not cut off until the battery level drops below the preset limit value, (power off 35, taught in paragraph 0042 lines 1-5), the battery unable to power the transceiver when the charge is below the low level (paragraph 0040 lines 7-10).”

While Soini et al. may teach several different battery warning levels, Soini et al. does not disclose a “low level” below which radio transmission and reception of data continues at the same time the battery is unable to power the radio transmission and reception of messages when the charge is below the low level. For example, Soini et al. teaches that at the first preset limit value 1 Warning 32, a warning is displayed, but does not teach that the battery is unable to power the radio transmission and reception of messages when the charge is below the first preset limit value 1 Warning 32. See Soini et al., paragraph [0040]. Moreover, even if Soini et al. were to inherently teach that the radio transmission and reception of messages takes place while the battery is below the first preset limit value 1 Warning 32, Soini et al. also inherently teaches that such radio transmission and reception is powered by the battery below the first preset limit value 1 Warning 32. Thus, Soini et al. does not teach that the radio transmission and reception of messages takes place while the battery is unable to power the radio transmission and reception of messages below the first preset limit value 1 Warning 32, or that charging is provided for the battery at the same time as for the radio transmission and reception below the first preset limit value 1 Warning 32.

Soini et al. also teaches that at the second preset limit value 2 Warning 33, “mobile service station 1 cuts off power supply to means 42, which are connected with transmission and reception of messages by radio.” See Soini et al., paragraph [0040]. Thus, Soini et al. does not teach that radio transmission and reception takes place while the battery is unable to power the radio transmission and reception of messages below the second preset limit value 2 Warning 33. Nor does Soini et al. teach that charging is provided for the battery at the same time as for radio transmission and reception below the second preset limit value 2 Warning 33. Thus, the combination of Miller and Soini et al. fails to teach, disclose, or suggest a “transceiver configured to send and receive data while the battery charge is below the low level and the recharging connector receives power from a power source and provides power to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level” as included in the combination of elements of claim 14.

George et al. fails to disclose any of the elements of claim 14 mentioned above that are lacking in the combination of Miller and Soini et al. In the final Office Action dated July 26, 2005, the Examiner stated that George et al. teaches “an apparatus for recharging a rechargeable battery in a hand held transceiver while maintaining communications capability through the transceiver when the rechargeable battery is unable to power the transceiver (abstract, col. 1 lines 9-18 and col. 1 lines 40-67).” In an Advisory Action dated October 20, 2005, the Examiner further stated that “[t]he George et al. and Soini et al. reference was used to modify the Miller data phone so that the data phone could to continuous transmit and receive data while the rechargeable batter is recharging, thereby providing continuous power to the transceiver while powering the battery when using internet service.”

George et al., however, discloses that batteries conventionally must be removed for recharging, the removal of the battery rendering the receiver inoperable. George et al. also discloses that in its invention “[t]he battery charger further includes charging circuit means for selectively charging the transceiver battery from a source of a first voltage during transmit mode and the source of a second, higher voltage during receive mode.” See George et al., col. 1, lines 49-53. George et al. teaches that the first and second charging voltages are selected using a PTT switch. See George et al., col. 4, lines 54-57. Thus, George et al. teaches the use of a PTT switch to select a first voltage during a transmit mode and a second voltage during a receive mode while charging a battery, and, as with Miller, does not disclose a “low level” below which the battery is unable to power the transceiver, and below which the transceiver and battery are both powered by the battery charger. Furthermore, George et al. has nothing to do with radio transmission of data, but rather discloses “a conventional transceiver having a microphone, speaker, and ... a push-to-talk (PTT) switch” Col. 3, lines 28-34. Thus, the cited combination of Miller in view of Soini et al. and further in view of George et al. does not teach or disclose a “transceiver configured to send and receive data while the battery charge is below the low level and the recharging connector receives power from a power source and provides power to the rechargeable battery and to the transceiver, the low level being a level at which the

battery is unable to power the transceiver when the charge is below the low level” as included in the combination of elements of claim 14.

Therefore, it is respectfully submitted that the Examiner has failed to establish a prima facie case of obviousness because the combination of Miller, Soini et al., and George et al. does not teach or suggest at least one element of claim 14, and that and the rejection of claim 14 should be reversed. Furthermore, claims 15-16 depend from independent claim 14, and therefore the rejection of claims 15-16 should be reversed for at least the same reasons as discussed above with regard to claim 14. See 35 U.S.C. § 112 ¶ 4.

B. The Examiner’s Rejection of Claims 1, 3 and 14-16 Should Be Reversed Because There Is No Suggestion to Combine the Teachings of Miller, Soini et al., and George et al.

To establish a prima facie case of obviousness based on a combination of prior art references under 35 U.S.C. § 103(a), the Examiner must first show that there is a suggestion or motivation to combine the teachings of these references. To satisfy this burden, the Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. In re Fritch, 972 F.2d 1260 (Fed. Cir. 1992). When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the Examiner to explain why the combination of the teachings is proper. Ex parte Skinner, 2 U.S.P.Q.2d 1788 (Bd. Pat. App. & Inter. 1986). In this case, the Examiner has not shown there would have been any motivation or suggestion to combine the teachings of Miller, Soini et al., and George et al.

In the final Office Action dated July 26, 2005, the Examiner stated with regard to both claim 1 and claim 14 that:

[I]t would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miller transceiver with a transceiver configured to send and receive data while the battery charge is below the low level, the battery unable to power the transceiver when the charge is below the low level, and the recharger provides charge to the rechargeable battery and to the

transceiver, the low level being a level which the battery is unable to power the transceiver when the charge is below the low level in order for the data phone to continuously transmit and receive data while the rechargeable battery is recharging, thereby providing continuous power to the transceiver while powering the battery when using internet service, as taught by Soini et al and George et al.

In an Advisory Action dated October 20, 2005, the Examiner stated that:

The motivation for combining George et al., Miller, and Soini et al. is to modify Miller data phone to continuously transmit and receive data while the rechargeable battery is recharging, thereby providing continuous power to the transceiver while powering the battery when using internet service, as taught by Soini et al and George et al.

Contrary to the Examiner's assertion, one of ordinary skill in the art would not have been motivated to combine the teachings of Miller with the teachings of Soini et al. because Soini et al. teaches away from both Miller's use of a charger and the use of a recharger as recited in claims 1 and 14 to power the sending and receiving of data when the battery is unable to power the transceiver. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. See W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983). It is improper to combine references where the references teach away from their combination. See In re Grasselli, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983). When a reference teaches away from the claimed invention, that teaching is strong evidence of non-obviousness. See U.S. v. Adams, 383 U.S. 39, 148 U.S.P.Q. 79 (1966); In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). As stated above, Soini et al. does not disclose any level below which a recharger provides charge to continue radio transmission and reception of data when the battery is unable to power the telephone module or other means for radio transmission and reception of data. Viewed as a whole, Soini et al. teaches battery management and data storage techniques wherein radio transmission and reception of data is limited to periods in which the battery is able power radio transmission and reception. By teaching in paragraph [0040] that "if voltage over battery 46 drops further below preset limit value 2 warning 33, the multi-service mobile station 1 cuts off

power supply to means 42, which are connected with the transmission and reception of messages by radio,” Soini et al. teaches away from both Miller’s use of a recharger and the use of a recharger as recited in claims 1 and 14 to power the sending and receiving of data when the battery is unable to power the transceiver. As such, one of ordinary skill in the art would not have been motivated to combine Miller’s charger with the battery management techniques of Soini et al. to somehow arrive at the subject matter of claim 14.

One of ordinary skill in the art would not have been motivated to combine the teachings of Miller with the teachings of George et al. because to modify the portable data phone of Miller to include the PTT switch-enabled battery charger of George et al. would, in effect, change a principle of operation of Miller. If the proposed combination of the references would change the principle of operation of the reference being modified, the teachings of the references are not sufficient to render the claims prima facie obvious. See In re Ratti, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959). To modify the portable data phone of Miller to include the PTT switch-enabled battery charger of George et al. would also render Miller unsuitable for its intended purpose of transmitting and receiving data. If proposed modification would render the prior art unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. See In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

Viewed as a whole, George et al. teaches battery charging and transmission in the context of voice transmission. George et al. has nothing to do with radio transmission of data, but rather discloses “a conventional transceiver having a microphone, speaker, and ... a push-to-talk (PTT) switch” Col. 3, lines 28-34. George et al. discloses that “PTT switch 16 in the charger amplifier is used for selecting the operating modes of both the charger amplifier and the transceiver. Col. 4, lines 54-57. Thus, viewed as a whole, George et al. discloses only a conventional transceiver that requires a PTT switch for the transceiver to operate, and also to enable different charge levels for transmit and receive modes during charging. To modify the portable data phone of Miller to include the PTT switch-enabled battery charger of George et al. would, in effect, change a principle of operation of Miller (i.e., transmission and reception of

data without the use of a PTT switch) and would also render Miller unsuitable for its intended purpose of transmitting and receiving data. Accordingly, one of ordinary skill in the art would not have been motivated to combine Miller's portable data phone with the PTT switch-enabled battery charger of George et al. to somehow arrive at the subject matter of claim 14, which also involves the radio transmission of data.

Therefore, it is respectfully submitted that the Examiner has failed to establish a prima facie case of obviousness because there is no suggestion or motivation to combine the teachings of Miller, Soini et al., and George et al. and that and the rejection of claims 1, 3, and 14-16 should be reversed.

III. REJECTION OF CLAIMS 2 AND 4-6 UNDER 35 U.S.C. § 103(a) BASED ON MILLER IN VIEW OF SOINI ET AL. AND GEORGE ET AL., AND FURTHER IN VIEW OF HAZZARD ET AL.

In the final Office Action dated July 26, 2005, the Examiner rejected claims 2 and 4-6 under 35 U.S.C. § 103(a) as being unpatentable over Miller in view of Soini et al. and George et al., and further in view of Hazzard et al. For the reasons stated below, the Examiner's rejection of claims 2 and 4-6 should be reversed.

Claims 2 and 4-6 depend from claim 1. As explained above in sections 7(II)(A)(1) and 7(II)(B), the combination of Miller in view of Soini et al. and further in view of George et al. fails to render the subject matter of claim 1 prima facie obvious. As to Hazzard et al., it fails to make up for any of the deficiencies in the combination of Miller in view of Soini et al. and further in view of George et al. mentioned above. Because claims 2 and 4-6 depend from claim 1, the Examiner's rejection of claims 2 and 4-6 should be reversed for at least the same reasons as discussed above with regard to claim 1. See 35 U.S.C. § 112 ¶ 4.

IV. REJECTION OF CLAIMS 7-13 UNDER 35 U.S.C. § 103(a) BASED ON SOINI ET AL. IN VIEW OF JANIK ET AL. AND FURTHER IN VIEW OF GEORGE ET AL.

In the final Office Action dated July 26, 2005, the Examiner rejected claims 7-13 under 35 U.S.C. § 103(a) as being unpatentable over Soini et al. in view of Janik et al. and further in view of George et al.

Claim 7 is in independent form and claims 8-13 depend from claim 7.

The Examiner's rejection of claims 7-13 under 35 U.S.C. § 103(a) based on the combination of Soini et al., Janik et al., and George et al. should be reversed because the Examiner has failed to establish a prima facie case of obviousness with regard to claims 7-13. More specifically, for at least the reasons stated below, no proper combination of Soini et al., Janik et al., and George et al. teaches or suggests the subject matter of claims 7-13.

A. The Examiner's Rejection of Claims 7-13 Should Be Reversed Because the Combination of Soini et al., Janik et al., and George et al. Does Not Teach or Suggest At Least One Element of Each of Claims 7-13.

A prima facie case of obviousness requires that the prior art reference or references teaches or suggests all of the claimed limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). The combination of Soini et al., Janik et al., and George et al. does not teach or suggest at least one element of each of claims 7-13. Accordingly, the Examiner has failed to establish a prima facie case of obviousness, and the rejection of claims 7-13 should be reversed.

Independent claim 7 recites in combination with other steps "providing power from the recharger to the transceiver of the handheld computer and the battery while the handheld computer is coupled to the recharger" and "establishing an RF link using the transceiver while the battery has a relatively low charge and the handheld computer is coupled to the recharger." Claim 7 also recites "the relatively low charge being too low to transmit information using a transceiver of the handheld computer." The cited combination of Soini et al., Janik et al., and

George et al. does not teach or suggest “providing power from the recharger to the transceiver of the handheld computer and the battery while the handheld computer is coupled to the recharger,” “establishing an RF link using the transceiver while the battery has a relatively low charge and the handheld computer is coupled to the recharger,” and “the relatively low charge being too low to transmit information using a transceiver of the handheld computer” as recited in the combination of steps of claim 7.

In the final Office Action dated July 26, 2005, the Examiner stated that:

Soini et al. discloses ... providing the handheld computer (Multi-service mobile station) with a rechargeable battery (fig. 4 number 46) having a relatively low charge (paragraph 0040 lines 2-9); ... (i.e., below the preset limit value 2warning 33, a relative low charge being too low to transmit information using a transceiver of the multi-service mobile station) which cuts off power supply means 42 which are connected with the transmission and reception of messages by radio, paragraph 0040 lines 2-10).

Soini et al., however, for many of the same reasons stated above in section 7(A)(1), does not disclose a “relatively low charge” below which its disclosed radio transmission and reception of data continues at the same time the battery is unable to power the radio transmission and reception of messages when the charge is below the low level. Soini et al. does not teach or suggest “providing power from the recharger to the transceiver of the handheld computer and the battery while the handheld computer is coupled to the recharger,” “establishing an RF link using the transceiver while the battery has a relatively low charge and the handheld computer is coupled to the recharger,” and “the relatively low charge being too low to transmit information using a transceiver of the handheld computer” as recited in the combination of steps of claim 7.

In the final Office Action dated July 26, 2005, the Examiner acknowledged that:

Soini et al. differs from claim 7 of the present invention in that it does not disclose coupling the handheld computer to a recharger; providing power from the charger to the transceiver of the handheld computer while the handheld computer while the handheld computer is coupled to the recharger and establishing an RF link using the transceiver while providing power to the

transceiver while the battery has a low charge and the handheld computer is coupled to the recharger.

The Examiner further stated, however, that:

Janik et al. teaches a coupling a PDA (fig. 1 number 2) to a recharger (fig. 8 number 56 and paragraph 0043 lines 1-7); providing power from the charger to a transceiver (fig. 8 number 78) of the handheld computer (PDA) while the handheld computer (PDA) is coupled to the recharger (inherent since the transceiver is connected to the PDA (fig. 8 number 78) while the PDA battery is being charged within the docking cradle (fig. 2 number 54), as taught in paragraph 0043 lines 1-7). George et al. teaches an apparatus for recharging a rechargeable battery in a hand held transceiver through a charging connector while maintaining communications capability through the transceiver (abstract, col. 1 lines 40-67 and fig. 2 number 21).

Janik et al. at paragraph [0043] discloses that “[w]hen battery charger 56 is connected to wireless LAN adapter module 14 through adapter-to-cradle connector 24, it charges both battery in PDA 2 and battery 86 in wireless LAN adapter module 14,” with no mention of “providing power from the recharger to the transceiver of the handheld computer and the battery while the handheld computer is coupled to the recharger,” “establishing an RF link using the transceiver while the battery has a relatively low charge and the handheld computer is coupled to the recharger,” and “the relatively low charge being too low to transmit information using a transceiver of the handheld computer” as recited in the combination of steps of claim 7.

George et al. discloses that batteries conventionally must be removed for recharging, the removal of the battery rendering the receiver inoperable. George et al. also discloses that in its invention “[t]he battery charger further includes charging circuit means for selectively charging the transceiver battery from a source of a first voltage during transmit mode and the source of a second, higher voltage during receive mode.” See George et al., col. 1, lines 49-53. George et al. teaches that the first and second charging voltages are selected using a PTT switch. See George et al., col. 4, lines 54-57. Thus, George et al. teaches the use of a PTT switch to select a first voltage during a transmit mode and a second voltage during a receive mode while charging a

battery and does not disclose a level below which the battery is unable to power the transceiver, and below which the transceiver and battery are both powered by the battery charger. Furthermore, George et al. has nothing to do with radio transmission of data, but rather discloses “a conventional transceiver having a microphone, speaker, and ... a push-to-talk (PTT) switch ...” Col. 3, lines 28-34. Thus, the cited combination of Soini et al. in view of Janik et al. and further in view of George et al. does not teach or disclose suggest “providing power from the recharger to the transceiver of the handheld computer and the battery while the handheld computer is coupled to the recharger,” “establishing an RF link using the transceiver while the battery has a relatively low charge and the handheld computer is coupled to the recharger,” and “the relatively low charge being too low to transmit information using a transceiver of the handheld computer” as recited in the combination of steps of claim 7.

Therefore, it is respectfully submitted that the Examiner has failed to establish a prima facie case of obviousness because the combination of Soini et al., Janik et al., and George et al. does not teach or suggest at least one element of claim 7, and that and the rejection of claim 7 should be reversed. Furthermore, claims 8-13 depend from independent claim 7, and therefore the rejection of claims 8-13 should be reversed for at least the same reasons as discussed above with regard to claim 7. See 35 U.S.C. § 112 ¶ 4.

B. The Examiner’s Rejection of Claims 7-13 Should Be Reversed Because There Is No Suggestion to Combine the Teachings of Soini et al., Janik et al., and George et al.

To establish a prima facie case of obviousness based on a combination of prior art references under 35 U.S.C. § 103(a), the Examiner must first show that there is a suggestion or motivation to combine the teachings of these references. To satisfy this burden, the Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. In re Fritch, 972 F.2d 1260 (Fed. Cir. 1992). When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the Examiner to explain why the combination of the teachings is proper. Ex parte Skinner, 2 U.S.P.Q.2d 1788 (Bd. Pat.

App. & Inter. 1986). In this case, the Examiner has not shown there would have been any motivation or suggestion to combine the teachings of Soini et al., Janik et al., and George et al.

In the final Office Action dated July 26, 2005, the Examiner stated with regard to both claim 1 and claim 14 that:

[I]t would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Soini et al. rechargeable battery with coupling the handheld computer to a recharger; providing power from the charger to a transceiver of the handheld computer while the handheld computer is coupled to the recharger and establishing an RF link using the transceiver while providing power to the transceiver while the battery has a low charge and the handheld computer is coupled to the recharger in order to charge the multi-service mobile station rechargeable battery when transmitting a telefax or e-mail message through a wireless network when the multi-service mobile station rechargeable battery is exhausted, as taught by Janik et al., and George et al.

Contrary to the Examiner's assertion, one of ordinary skill in the art would not have been motivated to combine the teachings of Soini et al. with the teachings of Janik et al. and George et al. because Soini et al. teaches away from both Janik et al. and George et al.'s use of a charger and the use of a recharger as recited in claims 7 to establish an RF data link when the battery is unable to power the transceiver. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. See W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983). It is improper to combine references where the references teach away from their combination. See In re Grasselli, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983). When a reference teaches away from the claimed invention, that teaching is strong evidence of non-obviousness. See U.S. v. Adams, 383 U.S. 39, 148 U.S.P.Q. 79 (1966); In re Royka, 490 F. 2d 981, 180 U.S.P.Q. 580 (CCPA 1974). As stated above, Soini et al. does not disclose any level below which a recharger provides charge to continue radio transmission and reception of data when the battery is unable to power the telephone module or other means for radio transmission and reception of data. Viewed as a whole, Soini et al. teaches battery management and data storage

techniques wherein radio transmission and reception of data is limited to periods in which the battery is able power radio transmission and reception. By teaching in paragraph [0040] that “if voltage over battery 46 drops further below preset limit value 2 warning 33, the multi-service mobile station 1 cuts off power supply to means 42, which are connected with the transmission and reception of messages by radio,” Soini et al. teaches away from both Janik et al. and George et al.’s use of a recharger and the use of a recharger as recited in claims 1 and 14 to power the sending and receiving of data when the battery is unable to power the transceiver. As such, one of ordinary skill in the art would not have been motivated to combine Janik et al. or George et al.’s charger with the battery management techniques of Soini et al. to somehow arrive at the subject matter of claim 7.

One of ordinary skill in the art would not have been motivated to combine the teachings of Soini et al. and Janik et al. with the teachings of George et al. because to modify the multi-service mobile station of Soini et al. or the personal digital assistant of Janik et al. to include the PTT switch-enabled battery charger of George et al. would, in effect, change a principle of operation of Soini et al. and Janik et al. If the proposed combination of the references would change the principle of operation of the reference being modified, the teachings of the references are not sufficient to render the claims prima facie obvious. See In re Ratti, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959). To modify the multi-service mobile station of Soini et al. or the personal digital assistant of Janik et al. to include the PTT switch-enabled battery charger of George et al. would also render them unsuitable for their intended purposes of transmitting and receiving data. If proposed modification would render the prior art unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. See In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

Viewed as a whole, George et al. teaches battery charging and transmission in the context of voice transmission. George et al. has nothing to do with radio transmission of data, but rather discloses “a conventional transceiver having a microphone, speaker, and ... a push-to-talk (PTT) switch” Col. 3, lines 28-34. George et al. discloses that “PTT switch 16 in the charger

amplifier is used for selecting the operating modes of both the charger amplifier and the transceiver. Col. 4, lines 54-57. Thus, viewed as a whole, George et al. discloses only a conventional transceiver that requires a PTT switch for the transceiver to operate, and also to enable different charge levels for transmit and receive modes during charging. To modify the multi-service mobile station of Soini et al. or the personal digital assistant of Janik et al. to include the PTT switch-enabled battery charger of George et al. would, in effect, change a principle of operation of Soini et al. and/or Janik et al. (i.e., transmission and reception of data without the use of a PTT switch) and would also render Soini et al. and/or Janik et al. unsuitable for the intended purpose of transmitting and receiving data. Accordingly, one of ordinary skill in the art would not have been motivated to combine the multi-service mobile station of Soini et al. or the personal digital assistant of Janik et al. with the PTT switch-enabled battery charger of George et al. to somehow arrive at the subject matter of claim 14, which also involves the radio transmission of data.

Therefore, it is respectfully submitted that the Examiner has failed to establish a prima facie case of obviousness because there is no suggestion or motivation to combine the teachings of Soini et al., Janik et al., and George et al. and that the rejection of claims 7-13 should be reversed.

V. REJECTION OF CLAIM 17 UNDER 35 U.S.C. § 103(a) BASED ON MILLER IN VIEW OF SOINI ET AL. AND GEORGE ET AL., AND FURTHER IN VIEW OF HUAT

In the final Office Action dated July 26, 2005, the Examiner rejected claim 17 under 35 U.S.C. § 103(a) as being unpatentable over Miller in view of Soini et al. and George et al., and further in view of Huat. For the reasons stated below, the Examiner's rejection of claim 17 should be reversed.

Claim 17 depend from claim 14. As explained above in sections 7(II)(A)(2) and 7(II)(B), the combination of Miller in view of Soini et al. and further in view of George et al. fails to render the subject matter of claim 14 prima facie obvious. As to Huat, it fails to make up for any

of the deficiencies in the combination of Miller in view of Soini et al. and further in view of George et al. mentioned above. Because claim 17 depends from claim 14, the Examiner's rejection of claim 17 should be reversed for at least the same reasons as discussed above with regard to claim 14. See 35 U.S.C. § 112 ¶ 4.

VI. REJECTION OF CLAIMS 18-19 UNDER 35 U.S.C. § 103(a) BASED ON MILLER IN VIEW OF SOINI ET AL. AND GEORGE ET AL., AND FURTHER IN VIEW OF JANIK ET AL.

In the final Office Action dated July 26, 2005, the Examiner rejected claims 18-19 under 35 U.S.C. § 103(a) as being unpatentable over Miller in view of Soini et al. and George et al., and further in view of Janik et al. For the reasons stated below, the Examiner's rejection of claims 18-19 should be reversed.

Claims 18-19 depend from claim 14. As explained above in sections 7(II)(A)(2) and 7(II)(B), the combination of Miller in view of Soini et al. and further in view of George et al. fails to render the subject matter of claim 14 prima facie obvious. As to Janik et al., it fails to make up for any of the deficiencies in the combination of Miller in view of Soini et al. and further in view of George et al. mentioned above. Because claims 18-19 depend from claim 14, the Examiner's rejection of claims 18-19 should be reversed for at least the same reasons as discussed above with regard to claim 14. See 35 U.S.C. § 112 ¶ 4.

IV. REJECTION OF CLAIM 20 UNDER 35 U.S.C. § 103(a) BASED ON JANIK ET AL. IN VIEW OF SOINI ET AL. AND FURTHER IN VIEW OF GEORGE ET AL.

In the final Office Action dated July 26, 2005, the Examiner rejected claims 20 under 35 U.S.C. § 103(a) as being unpatentable over Janik et al. in view of Soini et al. and further in view of George et al.

Claim 20 is in independent form.

The Examiner's rejection of claim 20 under 35 U.S.C. § 103(a) based on the combination of Janik et al., Soini et al., and George et al. should be reversed because the Examiner has failed to establish a prima facie case of obviousness with regard to claim 20. More specifically, for at least the reasons stated below, no proper combination of Janik et al., Soini et al., and George et al. teaches or suggests the subject matter of claim 20.

A. The Examiner's Rejection of Claim 20 Should Be Reversed Because the Combination of Janik et al., Soini et al., and George et al. Does Not Teach or Suggest At Least One Element of Claim 20.

A prima facie case of obviousness requires that the prior art reference or references teaches or suggests all of the claimed limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (CCPA 1974). The combination of Janik et al., Soini et al., and George et al. does not teach or suggest at least one element of claim 20. Accordingly, the Examiner has failed to establish a prima facie case of obviousness, and the rejection of claim 20 should be reversed.

Independent claim 20 recites in combination with other steps "wherein the RF transceiver is configured to send and receive data while the battery charge is below the low level and the module receives power from a power source and provides power to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level." The cited combination of Janik et al. in view of Soini et al. and further in view of George et al. does not teach, disclose, or suggest "wherein the RF transceiver is configured to send and receive data while the battery charge is below the low level and the module receives power from a power source and provides power to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level" as included in the combination of elements of claim 20.

In the final Office Action dated July 26, 2005, the Examiner acknowledged that:

Janik et al. differs from claim 20 of the present invention in that it does not explicitly disclose the transceiver configured to send and receive data while the battery charge is below the low level, the

battery unable to power the transceiver, the low level being a level which the battery is unable to power the transceiver when the charge is below the low level.

However, the Office Action also states that “Soini et al teaches ... a transceiver configured to send and receive data while the battery charge is below the low level (inherent, since a warning is given to the user through the display when the battery drops below a pre-limit value 1warning 32),” that “if the voltage over the battery drops further below preset limit value 2 warning 33, the multi-service mobile station cuts off power supply to the telephone module which are connected with the transmission and reception of messages by radio,” and that “data traffic is not cut off until the battery level drops below the preset limit value, (power off 35, taught in paragraph 0042 lines 1-5), the battery unable to power the transceiver when the charge is below the low level (paragraph 0040 lines 7-10).”

While Soini et al. may teach several different battery warning levels, Soini et al. does not disclose a “low level” below which radio transmission and reception of data continues at the same time the battery is unable to power the radio transmission and reception of messages when the charge is below the low level. For example, Soini et al. teaches that at the first preset limit value 1 Warning 32, a warning is displayed, but does not teach that the battery is unable to power the radio transmission and reception of messages when the charge is below the first preset limit value 1 Warning 32. See Soini et al., paragraph [0040]. Moreover, even if Soini et al. were to inherently teach that the radio transmission and reception of messages takes place while the battery is below the first preset limit value 1 Warning 32, Soini et al. also inherently teaches that such radio transmission and reception is powered by the battery below the first preset limit value 1 Warning 32. Thus, Soini et al. does not teach that the radio transmission and reception of messages takes place while the battery is unable to power the radio transmission and reception of messages below the first preset limit value 1 Warning 32, or that charging is provided for the battery at the same time as for the radio transmission and reception below the first preset limit value 1 Warning 32.

Soini et al. also teaches that at the second preset limit value 2Warning 33, “mobile service station 1 cuts off power supply to means 42, which are connected with transmission and reception of messages by radio.” See Soini et al., paragraph [0040]. Thus, Soini et al. does not teach that radio transmission and reception takes place while the battery is unable to power the radio transmission and reception of messages below the second preset limit value 2Warning 33. Nor does Soini et al. teach that charging is provided for the battery at the same time as for radio transmission and reception below the second preset limit value 2Warning 33. Thus, the combination of Janik et al. and Soini et al. fails to teach or suggest “wherein the RF transceiver is configured to send and receive data while the battery charge is below the low level and the module receives power from a power source and provides power to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level,” as recited in the combination of elements of claim 20.

George et al. fails to disclose any of the elements of claim 20 mentioned above that are lacking in the combination of Janik et al. and Soini et al. In the final Office Action dated July 26, 2005, the Examiner stated that George et al. teaches “an apparatus for recharging a rechargeable battery in a hand held transceiver while maintaining communications capability through the transceiver when the rechargeable battery is unable to power the transceiver (abstract, col. 1 lines 9-18 and col. 1 lines 40-67).” George et al., however, discloses that batteries conventionally must be removed for recharging, the removal of the battery rendering the receiver inoperable. George et al. also discloses that in its invention “[t]he battery charger further includes charging circuit means for selectively charging the transceiver battery from a source of a first voltage during transmit mode and the source of a second, higher voltage during receive mode.” See George et al., col. 1, lines 49-53. George et al. teaches that the first and second charging voltages are selected using a PTT switch. See George et al., col. 4, lines 54-57. Thus, George et al. teaches the use of a PTT switch to select a first voltage during a transmit mode and a second voltage during a receive mode while charging a battery and does not disclose a “low level” below which the battery is unable to power the transceiver, and below which the transceiver and battery

are both powered by the battery charger. Furthermore, George et al. has nothing to do with radio transmission of data, but rather discloses “a conventional transceiver having a microphone, speaker, and ... a push-to-talk (PTT) switch” Col. 3, lines 28-34. Thus, the cited combination of Janik et al. in view of Soini et al. and further in view of George et al. does not teach or suggest “wherein the RF transceiver is configured to send and receive data while the battery charge is below the low level and the module receives power from a power source and provides power to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level,” as recited in the combination of elements of claim 20.

Therefore, it is respectfully submitted that the Examiner has failed to establish a prima facie case of obviousness because the combination of Janik et al., Soini et al., and George et al. does not teach or suggest at least one element of claim 20, and that and the rejection of claim 20 should be reversed.

B. The Examiner’s Rejection of Claims 20 Should Be Reversed Because There Is No Suggestion to Combine the Teachings of Janik et al., Soini et al., and George et al.

To establish a prima facie case of obviousness based on a combination of prior art references under 35 U.S.C. § 103(a), the Examiner must first show that there is a suggestion or motivation to combine the teachings of these references. To satisfy this burden, the Examiner must show some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references. In re Fritch, 972 F.2d 1260 (Fed. Cir. 1992). When the motivation to combine the teachings of the references is not immediately apparent, it is the duty of the Examiner to explain why the combination of the teachings is proper. Ex parte Skinner, 2 U.S.P.Q.2d 1788 (Bd. Pat. App. & Inter. 1986). In this case, the Examiner has not shown there would have been any motivation or suggestion to combine the teachings of Janik et al., Soini et al., and George et al.

In the final Office Action dated July 26, 2005, the Examiner stated with regard to claim 20 that:

[I]t would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Miller transceiver with the transceiver configured to send and receive data while the battery charge is below the low level, the battery unable to power the transceiver, the low level being a level which the battery is unable to power the transceiver when the charge is below the low level in order for the PDA to continuous transmit and receive data when its battery is low, thereby providing continuous power to the transceiver while using the World Wide Web, as taught by Soini et al and George et al.

Contrary to the Examiner's assertion, one of ordinary skill in the art would not have been motivated to combine the teachings of Janik et al. with the teachings of Soini et al. because Soini et al. teaches away from both Janik et al.'s use of a charger and the use of a recharger as recited in claim 20 to power the sending and receiving of data when the battery is unable to power the transceiver. A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention. See W.L. Gore & Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 220 U.S.P.Q. 303 (Fed. Cir. 1983). It is improper to combine references where the references teach away from their combination. See In re Grasselli, 713 F.2d 731, 743, 218 U.S.P.Q. 769, 779 (Fed. Cir. 1983). When a reference teaches away from the claimed invention, that teaching is strong evidence of non-obviousness. See U.S. v. Adams, 383 U.S. 39, 148 U.S.P.Q. 79 (1966); In re Royka, 490 F. 2d 981, 180 U.S.P.Q. 580 (CCPA 1974). As stated above, Soini et al. does not disclose any level below which a recharger provides charge to continue radio transmission and reception of data when the battery is unable to power the telephone module or other means for radio transmission and reception of data. Viewed as a whole, Soini et al. teaches battery management and data storage techniques wherein radio transmission and reception of data is limited to periods in which the battery is able power radio transmission and reception. By teaching in paragraph [0040] that "if voltage over battery 46 drops further below preset limit value 2 warning 33, the multi-service mobile station 1 cuts off power supply to means 42, which are connected with the transmission and reception of messages

by radio,” Soini et al. teaches away from both Janik et al.’s use of a recharger and the use of a recharger as recited in claim 20 to power the sending and receiving of data when the battery is unable to power the transceiver. As such, one of ordinary skill in the art would not have been motivated to combine Janik et al.’s charger with the battery management techniques of Soini et al. to somehow arrive at the subject matter of claim 20.

One of ordinary skill in the art would not have been motivated to combine the teachings of Janik et al. with the teachings of George et al. because to modify the personal digital assistant of Janik et al. to include the PTT switch-enabled battery charger of George et al. would, in effect, change a principle of operation of Janik et al. If the proposed combination of the references would change the principle of operation of the reference being modified, the teachings of the references are not sufficient to render the claims prima facie obvious. See In re Ratti, 270 F.2d 810, 123 U.S.P.Q. 349 (C.C.P.A. 1959). To modify the personal digital assistant of Janik et al. to include the PTT switch-enabled battery charger of George et al. would also render Janik et al. unsuitable for its intended purpose of transmitting and receiving data. If proposed modification would render the prior art unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed modification. See In re Gordon, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984).

Viewed as a whole, George et al. teaches battery charging and transmission in the context of voice transmission. George et al. has nothing to do with radio transmission of data, but rather discloses “a conventional transceiver having a microphone, speaker, and ... a push-to-talk (PTT) switch” Col. 3, lines 28-34. George et al. discloses that “PTT switch 16 in the charger amplifier is used for selecting the operating modes of both the charger amplifier and the transceiver. Col. 4, lines 54-57. Thus, viewed as a whole, George et al. discloses only a conventional transceiver that requires a PTT switch for the transceiver to operate, and also to enable different charge levels for transmit and receive modes during charging. To modify the personal digital assistant of Janik et al. to include the PTT switch-enabled battery charger of George et al. would, in effect, change a principle of operation of Janik et al. (i.e., transmission

and reception of data without the use of a PTT switch) and would also render Janik et al. unsuitable for its intended purpose of transmitting and receiving data. Accordingly, one of ordinary skill in the art would not have been motivated to combine Janik et al.'s personal digital assistant with the PTT switch-enabled battery charger of George et al. to somehow arrive at the subject matter of claim 20, which also involves the radio transmission of data.

Therefore, it is respectfully submitted that the Examiner has failed to establish a prima facie case of obviousness because there is no suggestion or motivation to combine the teachings of Janik et al., Soini et al., and George et al. and that the rejection of claim 20 should be reversed.

8. CONCLUSION

In view of the foregoing, Appellants submit that claims 1, 3, and 14-16 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Miller, Soini et al., and George et al. and are therefore patentable. Appellants also submit that claims 2 and 4-6 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Miller, Soini et al., George et al., and Hazzard et al. and are therefore patentable. Appellants also submit that claims 7-13 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Soini et al., Janik et al., and George et al. and are therefore patentable. Appellants also submit that claim 17 is not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Miller, Soini et al., George et al., and Huat and is therefore patentable. Appellants also submit that claims 18-19 are not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Miller, Soini et al., George et al., and Janik et al. and are therefore patentable. Appellants further submit that claim 20 is not properly rejected under 35 U.S.C. § 103(a) as being unpatentable over the combination of Janik et al., Soini et al., and George et al. and is therefore patentable.

Accordingly, Appellants respectfully request that the Board reverse all claim rejections and indicate that a notice of allowance respecting all pending claims should be issued.

Respectfully submitted,

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By Chad E. Bement

FOLEY & LARDNER LLP
Customer Number: 26371
Telephone: (414) 297-5554
Facsimile: (414) 297-4900

Chad E. Bement
Attorney for Applicant
Registration No. 54,991



CLAIMS APPENDIX

1. A handheld computer system, comprising:
 - a housing;
 - a display supported by the housing;
 - a processor coupled to the display;
 - a rechargeable battery configured to power the processor and the display;
 - a recharging connector coupled to the rechargeable battery;
 - a recharger coupled to the recharging connector; and
 - a radio frequency transceiver coupled to the processor and powerable by the battery when the battery has a charge above a low level, the transceiver configured to send and receive data while the battery charge is below the low level and the recharger provides charge to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level.
2. The handheld computer system of claim 1, wherein the recharger is a recharging cradle.
3. The handheld computer system of claim 1, wherein the recharger includes a recharger connector configured to couple to the recharging connector.
4. The handheld computer system of claim 1, wherein the recharger is also a synchronization cradle.

5. The handheld computer of claim 4, wherein the synchronization cradle includes an electrical connector that is configured to couple to the recharging connector.

6. The handheld computer system of claim 5, wherein the electrical connector is configured to couple to a data connector on the handheld computer.

7. A method of transmitting data over a radio frequency (RF) link from a handheld computer having a low battery charge, comprising:

providing the handheld computer with a rechargeable battery having a relatively low charge, the relatively low charges being too low to transmit information using a transceiver of the handheld computer;

coupling the handheld computer to a recharger;

providing power from the recharger to the transceiver of the handheld computer and the battery while the handheld computer is coupled to the recharger;

establishing an RF link using the transceiver while the battery has a relatively low charge and the handheld computer is coupled to the recharger.

8. The method of claim 7, further comprising:

providing power from the rechargeable battery to the transceiver.

9. The method of claim 7, further comprising:

coupling the handheld computer to a synchronization cradle, the synchronization cradle having a charger connector.

10. The method of claim 7, further comprising:
providing data across the RF link.
11. The method of claim 7, further comprising:
draining the rechargeable battery to a charge level at which the transceiver
is unable to establish an RF link.
12. The method of claim 7, further comprising:
receiving an e-mail message.
13. The method of claim 7, further comprising:
receiving a cellular telephone call.
14. A handheld computer, comprising:
a housing;
a display supported by the housing;
a processor coupled to the display;
a rechargeable battery configured to power the processor and the display;
a recharging connector coupled to the rechargeable battery; and
a radio frequency (RF) transceiver coupled to the processor and powerable
by the battery when the battery has a charge above a low level, the transceiver configured to send
and receive data while the battery charge is below the low level and the recharging connector
receives power from a power source and provides power to the rechargeable battery and to the

transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level.

15. The handheld computer of claim 14, further comprising:
a computer program running on the processor, the computer program configured to request access to the RF transceiver.
16. The handheld computer of claim 15, wherein the computer program is an e-mail program.
17. The handheld computer of claim 15, wherein the computer program is an always-on e-mail program.
18. The handheld computer of claim 14, further comprising:
an expansion connector coupled to the processor, the expansion connector configured to couple to input/output devices.
19. The handheld computer of claim 18, wherein the RF transceiver is coupled to the expansion connector.
20. A handheld computer, comprising:
an expansion module including a rechargeable battery and a radio frequency (RF) transceiver, the battery configured to power the transceiver when the battery has a charge above a low level;
a processor;

a display; and

a module connector configured to couple to the expansion module,

wherein the RF transceiver is configured to send and receive data while the battery charge is below the low level and the module receives power from a power source and provides power to the rechargeable battery and to the transceiver, the low level being a level at which the battery is unable to power the transceiver when the charge is below the low level.

EVIDENCE APPENDIX

None

RELATED PROCEEDINGS APPENDIX

None